



UK Pilot Overview

January 2016



Pilot Overview



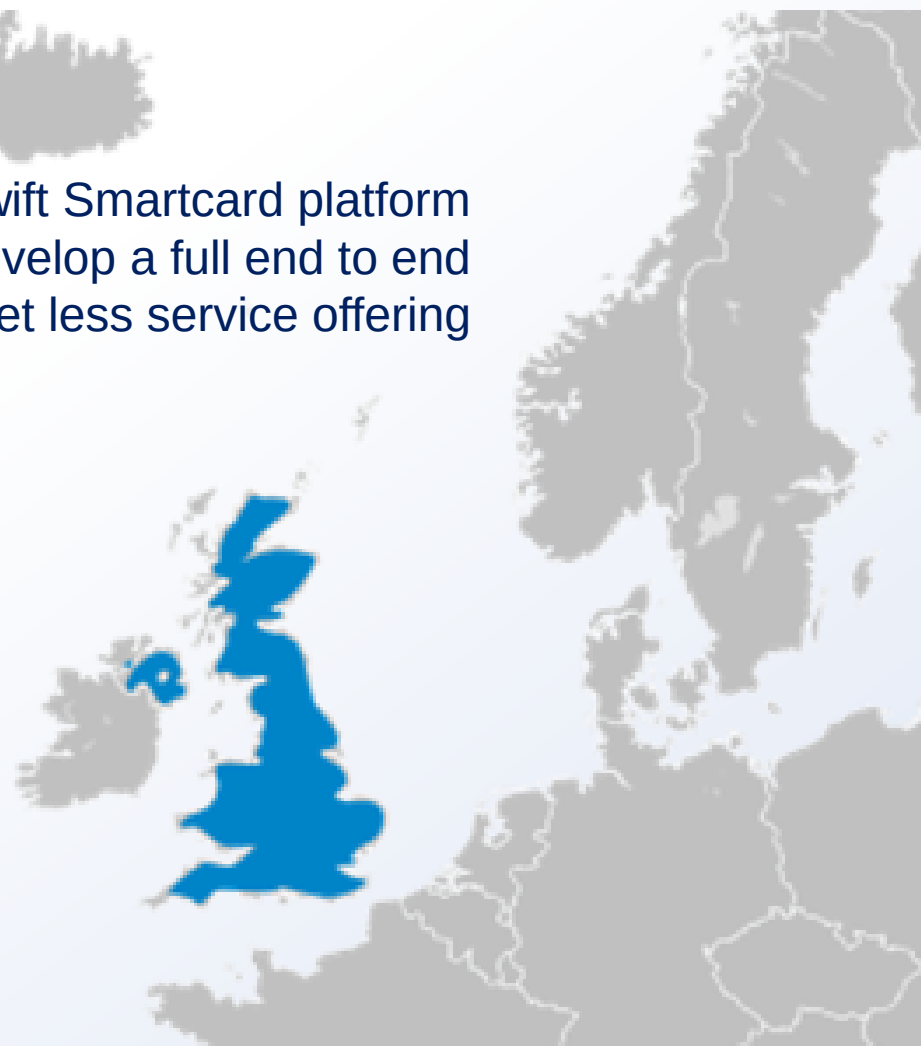
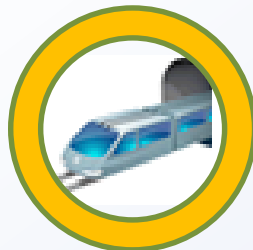
MobiWallet



The UK pilot in West Midlands, **Birmingham**, will implement a fares management engine '**MobiWallet Engine**', offering a complete public transport mobility solution for the region, in partnership with private travel operators.



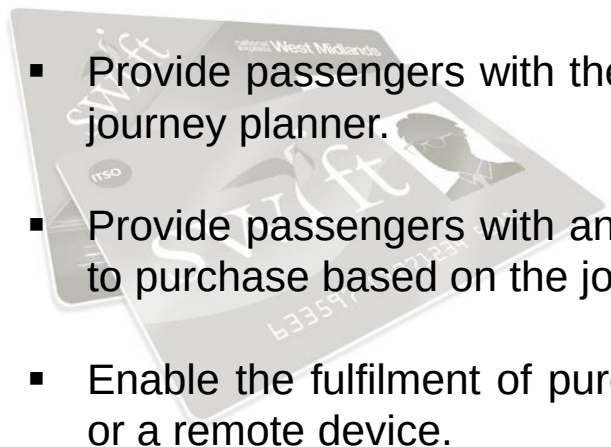
Using our current Swift Smartcard platform to enhance and develop a full end to end ticket less service offering



Pilot Objectives



Centro aims to develop a fares management engine that will support customers in selecting the most appropriate fare for the specific journey needs, increasing smart mobility, journey planning and integrated ticketless travel across the conurbation.

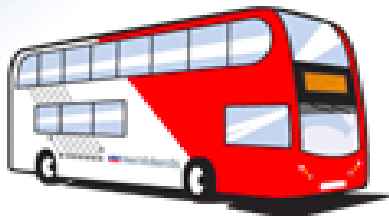
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- Provide passengers with the ability to purchase a ticket as the final function of the journey planner.
 - Provide passengers with an intelligent list of options of the most appropriate ticket to purchase based on the journey they have planned.
 - Enable the fulfilment of purchased tickets through an NFC enabled mobile phone or a remote device.
 - Inform passengers of the most appropriate ticket for them based on their actual travel habits.
 - Provide an intuitive solution that is easy to use and supports the delivery of an increase in customer satisfaction
 - Increase public transport use



Baseline Information



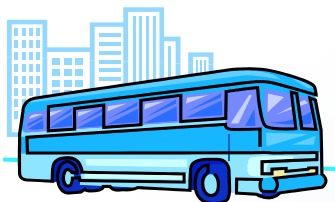
MobiWallet



- ❖ 1400+ Smart ETM deployed and in use by West Midlands Bus Operators
- ❖ Supported via Centro Managed Service



- ❖ Swift Smart Card
- ❖ Limited Ticketing Products on Swift
- ❖ Purchase via Direct debit
- ❖ Fulfilment via Paper ticket



- ❖ Bus only
- ❖ 10 Bus Operators
- ❖ Lack of buy in via main operator



MobiWallet Impacts/Effects



MobiWallet



ETM's

- ❖ Provides validation to travel
- ❖ Equipment performance challenges
- ❖ Improves boarding times
- ❖ Paperless ticket provisions



- ❖ Removes need for paper ticket
- ❖ Provides seamless Customer travel offering
- ❖ Provides travel ticket discounts
- ❖ Safe & Secure – no need for cash
- ❖ 18000 Registered users

Operators

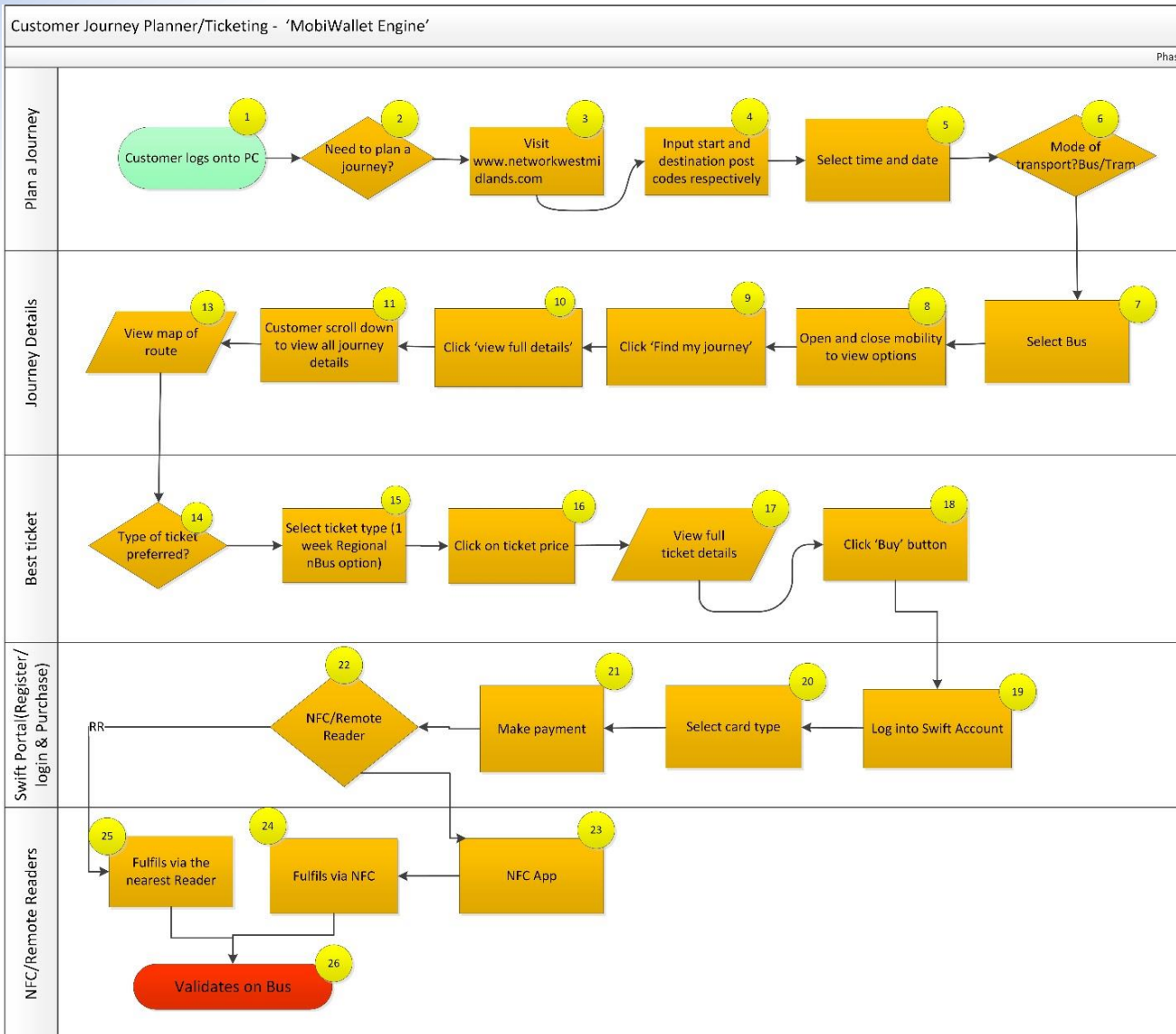
- ❖ On bus boarding times reduced/streamlined
- ❖ Multi modal travel
- ❖ Investment for on vehicle and back office infrastructure
- ❖ Swift Agreements



UK Pilot Customer Journey



MobiWallet





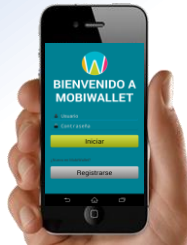
Interoperability Solutions: Key Elements implemented



MobiWallet



Medium



Swift App



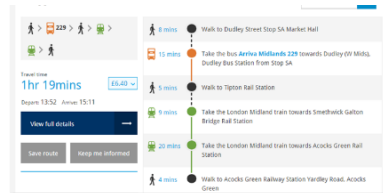
Allow users to....

- fulfil and load travel ticket onto Swift card

Platform



Mobiwallet Engine:
WebServices+DataBases



Journey Planner API and
Ticket Database

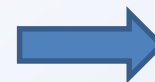


Core of the Platform: Stores user's travel data, transactions, swift card data and ticket fares data (HOPS/ Ticket database/ JP)

Gateway



Operator
Reimbursement
model



Swift Payment portal (CMS) and credit call systems

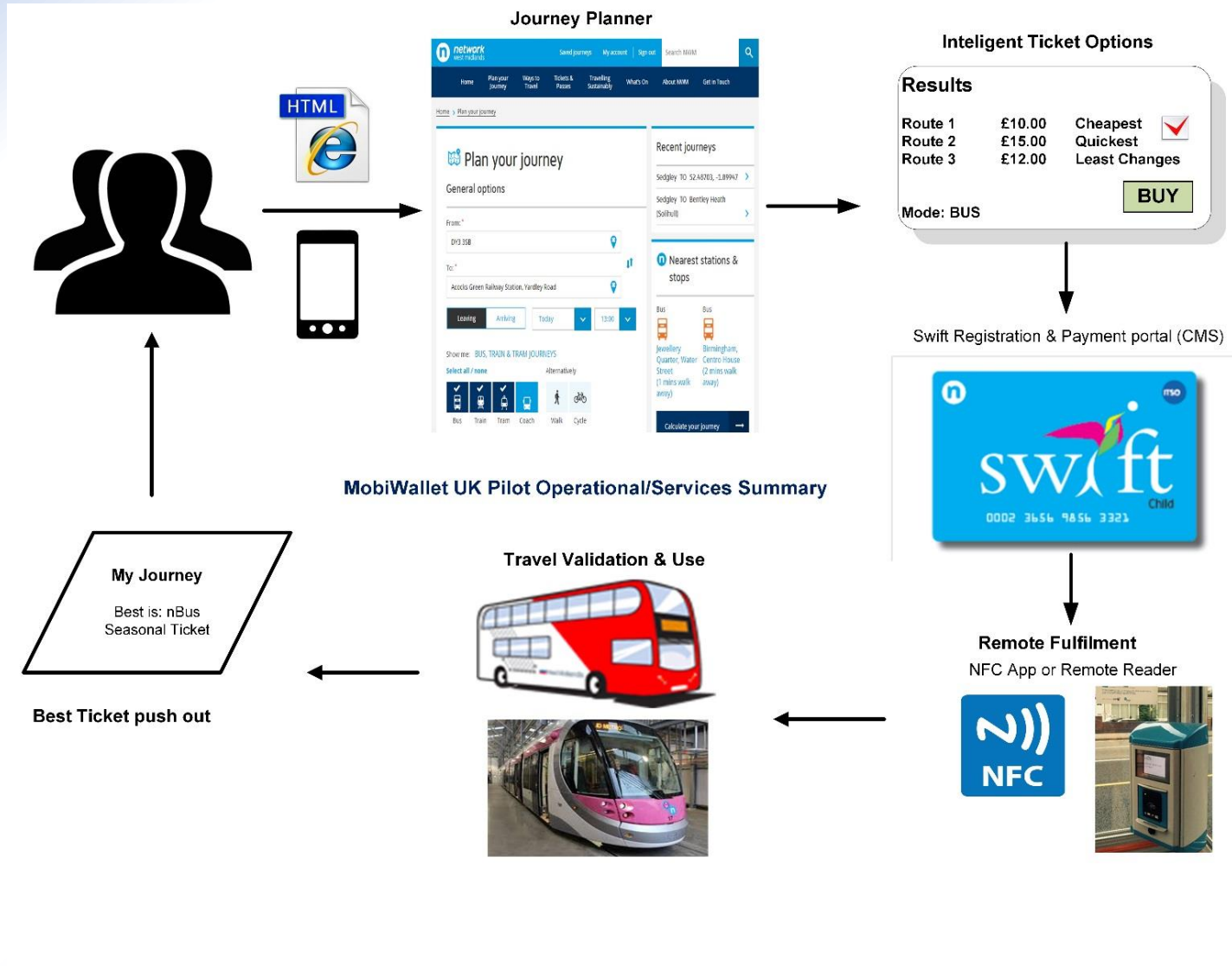
Payment gateway and clearing system to manage user's credit and payments as well as all the transfers to the different operators according to the use of their services.

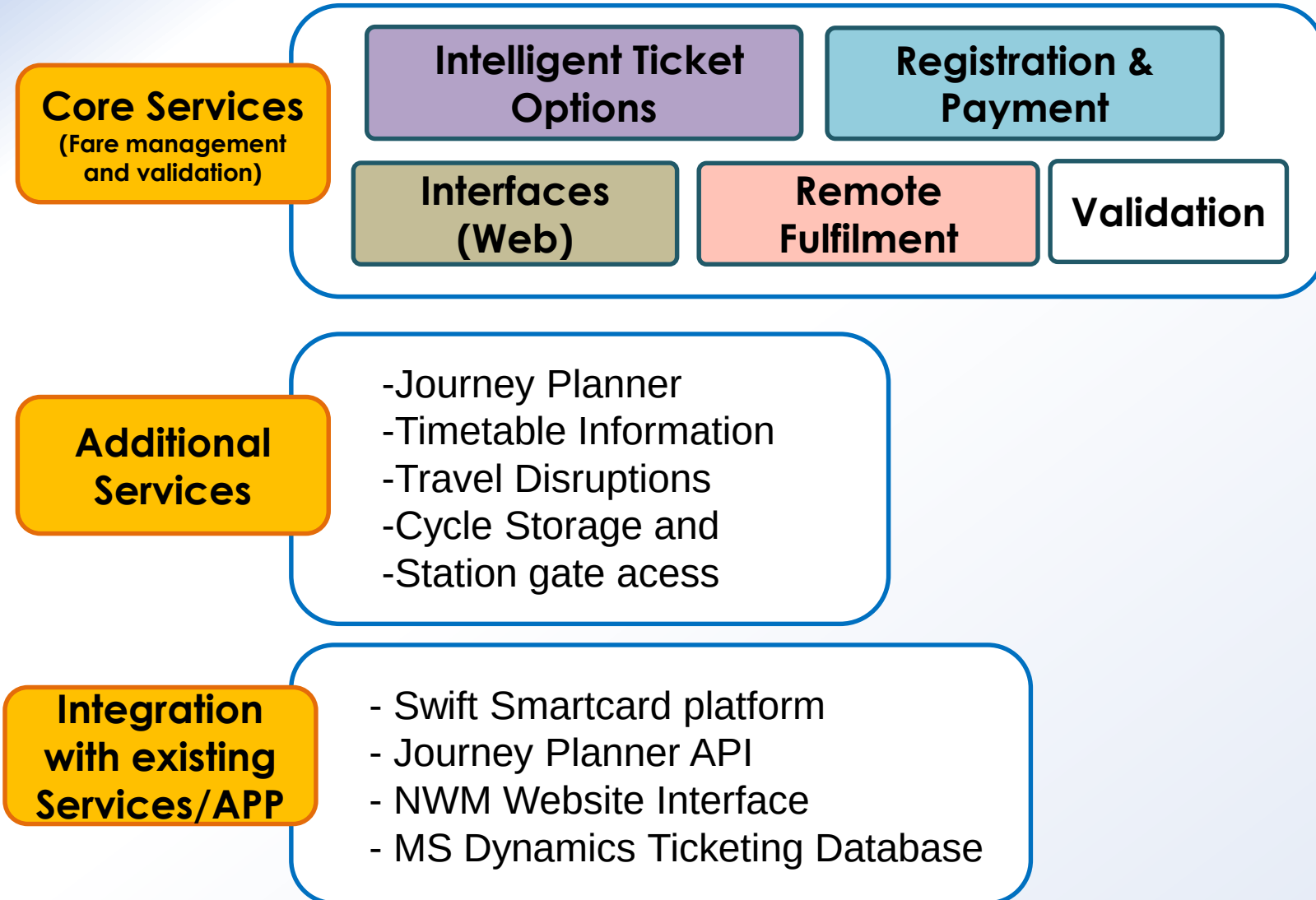


Services



MobiWallet







Core Services



MobiWallet



Purchase of a ticket, from a list of ticket options, selected intelligently based on the user journey planned and load the ticket onto their Swift card using a mobile phone, or on-street reader.

Core Services

Platform

Journey Planning

Enhanced Journey planner
(web portal) user interface

Intelligent Ticket Options

JP API & Ticket Database
integration

- User Plans a journey
- MobiWallet engine provides intelligent list of ticket options
- User selects preferred to purchase

The screenshot displays a journey planning interface. At the top, it shows a route summary with icons for walking, bus, and train. Below this, the travel time is listed as 1hr 19mins with a cost of £6.40. The departure time is 13:52 and the arrival time is 15:11. A 'View full details' button is present. The route details are as follows:

- 8 mins: Walk to Dudley Street Stop SA Market Hall
- 15 mins: Take the bus Arriva Midlands 229 towards Dudley (W Mids), Dudley Bus Station from Stop SA
- 5 mins: Walk to Tipton Rail Station
- 9 mins: Take the London Midland train towards Smethwick Galton Bridge Rail Station
- 20 mins: Take the London Midland train towards Acocks Green Rail Station
- 4 mins: Walk to Acocks Green Railway Station Yardley Road, Acocks Green



Core Services



MobiWallet



Core Services	
Payment Gateway	
Registration & Ticket Purchase	Payment Validation
Swift CMS	Bankers card & Credit call



- User registers through Swift Portal & CMS
- Existing User can purchase card using Swift CMS payment portal
- Verification of payment via credit call





Core Services

Core Services

Medium

Fulfilment

NFC App & Remote Reader



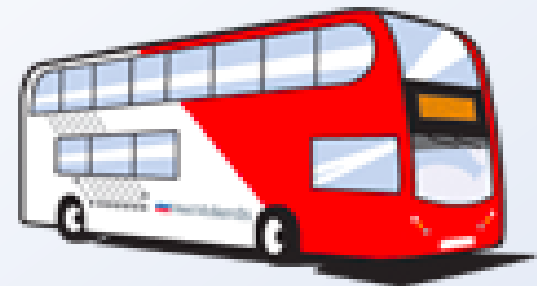
- User selects preferred fulfilment option – Download NFC app or collects via an on- street remote reader



Ticket & Travel Validation

Validation:

- Operator validates travel via ETM
- Operator is reimbursed through reimbursement system/model





Users Recruitment



Initial User testing: Enhanced JP Functionality tested via internal test group x30 test volunteers (complete)

Phase 2 Users: contacted **personally** 15 respondents from previous same Pre trial survey exercise.

- Promote the survey via a data capture form on the Centro Swift website and Unicard site and via email receipt from Unicard portal.

- Incentives; capture users for through survey immediately with incentive of £10 high street vouchers

- Phase 2: 200 users: Jan – March: Register interest as part of phase 1 Through survey data capture to be entered into a prize draw

Phase 2.2: March- July: promote both surveys via Swift Twitter account to drive traffic to the survey



Users Recruitment



User Timeline/plan

Nov	Dec	Jan	Feb	March	April	May	June	July
15- 30 user s		200 users						
Phase 1		Phase 2						

15 respondents: survey on Swift and Unicard website portal areas

Promotion of survey via email receipt from Unicard portal

200 respondents: Register interest as part of phase 1 Through survey data capture above, incentive to be entered into a prize draw, promote both surveys via websites, Swift Twitter account, data capture form will be developed within Communicator Corp email system placed with various sites, also promote this at travel centres and Payzone retail outlets, (Pre/Post & Through trial approach requirement)



Users Recruitment Scope



Test Areas

- Ticket payment & Fulfilment (phase 1)
- Journey Planner Interface Phase 2
- Mobiwallet Engine Functionality (full end to end) Phase 2

Test Medium

- Journey planner & Mobiwallet engine website
- Swift Card Portal (CMS)
- NFC App
- Remote readers (on street/at stop)
- On bus/tram ETM & swift card (validation)



Pilot Monitoring & Evaluation



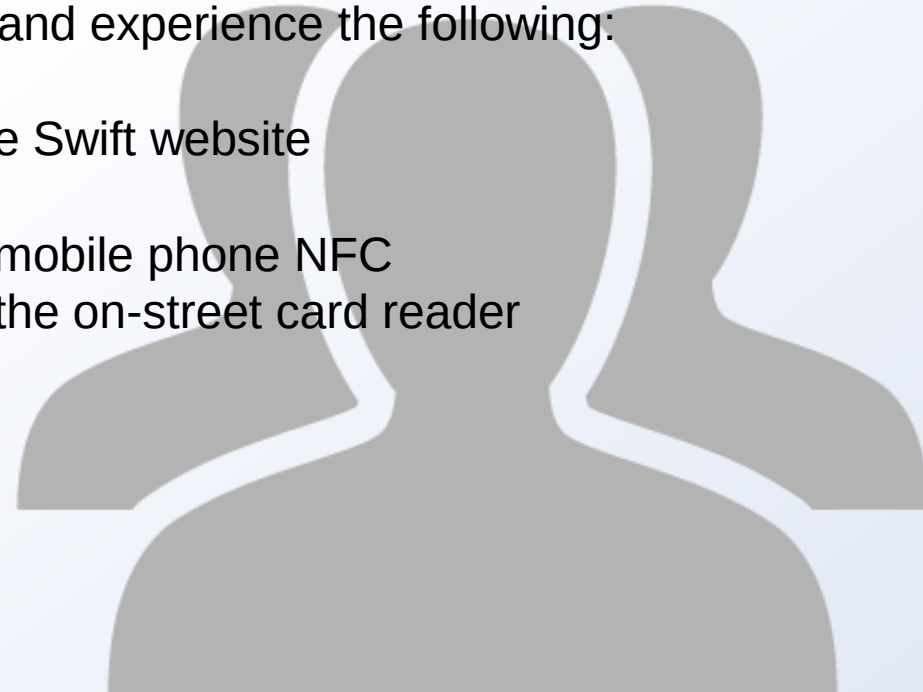
Remote Fulfilment (NFC App & Readers)

THE FOCUS GROUP:

15 participants who were and were not familiar with Near Field Communication (NFC) technology and the Swift CMS and Wesite.

Live demonstration and subsequent support provided by Centro. Participants were given 45 minutes to trial and experience the following:

- Selecting a ticket for a journey using the Swift website
- Downloading the Application
- Adding a ticket onto a Swift card using mobile phone NFC
- Adding a ticket onto a Swift card using the on-street card reader





Pilot Monitoring & Evaluation



Findings/ Feedback Results:

Website: Participants described the website as having a logical interface and found it easy to use. One participant specifically stated they felt the website would be good for older users given its simple design,

Downloading the Swift App: 13 of 15 participants were able to successfully download the App. The remainder of the group either had smartphones without NFC technology (Windows phones, iPhones or older smartphones) or had not previously downloaded Apps.

Loading ticket onto a Swift card using mobile NFC: Instructions on this process were required as well as troubleshooting instructions. Uncertainty on how close the card should be held to the phone, or where on the phone the card should be placed

Loading ticket onto a Swift card using Remote Reader :

Participants felt confident in using the machine and felt the coloured lights made it clear when a card had updated.



Pilot Monitoring & Evaluation Plan



Pre Trial Survey: this included data from the agreed pre trial questionnaire provided by TTR and specific fulfilment questions compiled within a formal Swift survey questionnaire; 190 completed surveys.

Pre Trial Survey Result data;

52% of respondents either strongly agree or agree that that they are likely to continue to use the Swift Pay as you go card

45% of respondents strongly agree or agree that they are satisfied with the range of top up payment methods available

85% of respondents feel it is very important or important that online top ups via the swift card are available

27% of respondents are aware that they can collect online purchases using the Swift App on Android NFC phones

Pre Trial Survey

Thank you for agreeing to take part in the pre trial survey

You have 5 minutes to complete this survey. Your responses will be anonymous and will be used in improving the payment system.

*** 1. Please enter your contact details**

Name

Address

ZIP/Postal Code

Email Address

*** 2. Gender**

☐ Male ☐ Female

*** 3. Which of the following age groups do you belong to?**

☐ 18 - 25

☐ 26 - 34

☐ 35 - 49

☐ 50 - 64

☐ 65 +

*** 4. Do you consider yourself to be in any of the following:**

☐ In full / part-time education

☐ In full / part-time employment

☐ Neither



Recent/on going developments



- System Build & Integration
- JP Front End Interface Design
- JP Upgrade UAT Testing
- JP Mobiwallet Engine Testing
- Best- ticket pushout logic

The screenshot shows the 'network west midlands' website interface. The top navigation bar includes links for 'Saved journeys', 'My account', 'Sign out', and a search bar. Below this is a secondary navigation bar with links for 'Home', 'Plan your journey', 'Ways to Travel', 'Tickets & Passes', 'Travelling Sustainably', 'What's On', 'About NWM', and 'Get in Touch'.

The main content area is titled 'Journey Results' and displays the following information:

- From: Sedgley
- To: Acocks Green Yardley Road
- Leaving: 02/07/2015 13:00
- Preferences: Using bus, tram, train

An 'Edit' button is located to the right of the preferences.

Below the journey results, there is a section for 'Suggested routes' with a dropdown menu set to 'Departure time'. The suggested route is displayed as a vertical timeline of steps:

- 8 mins: Walk to Dudley Street Stop SA Market Hall
- 15 mins: Take the bus Arriva Midlands 229 towards Dudley (W Mids), Dudley Bus Station from Stop SA
- 5 mins: Walk to Tipton Rail Station
- 9 mins: Take the London Midland train towards Smethwick Galton Bridge Rail Station
- 20 mins: Take the London Midland train towards Acocks Green Rail Station
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On the left side of the suggested route, there is a summary of the journey:

- Travel time: 1hr 19mins
- Fare: £6.40
- Depart: 13:52 Arrive: 15:11

Buttons for 'View full details', 'Save route', and 'Keep me informed' are also present.

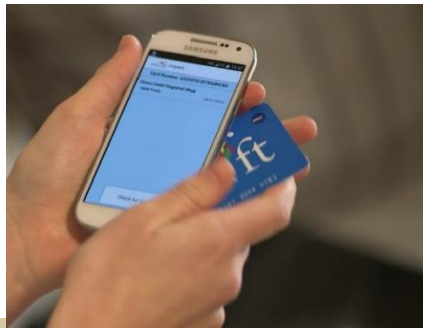


Current Status

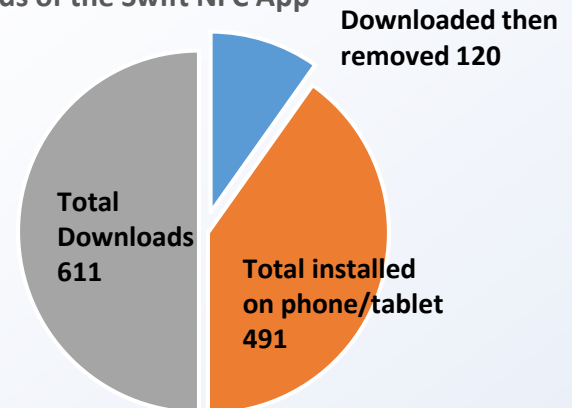


Remote Fulfilment:

- Number of registered Swift Card users: 1000+
- Number of Tickets purchased on Swift: 1005 tickets
- 18,000 Registered Swift card users
- Number of fulfilments via NFC app and Remote Reader: 657 collections



Successful downloads of the Swift NFC App



Successful Collections via Remote Readers and NFC App





Current Status



Swift (West Midlands Smartcard) has progressed significant works and has currently deployed the following;



- **Enhanced PAYG Ticket Product**
- **Swift on Metro (Tram)**
- **NX Operator Tickets**
- **Rail Development**
- **Cycle & Rail Access**





Stay tuned!



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